

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP 03/12699

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61K39/00 A61K49/16 A61P35/00 A61K39/395

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, MEDLINE, WPI Data, PAJ, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 91 03493 A (UNIV SOUTHAMPTON) 21 March 1991 (1991-03-21)	1-6, 12, 18, 19
Y	the whole document	7-11, 13-17, 20, 21
X	EP 0 404 097 A (BEHRINGWERKE AG) 27 December 1990 (1990-12-27) cited in the application	1, 2, 4-6, 12, 18, 19
Y	page 2, line 1 -page 3, line 46; claims 1-11	1-21
X	WO 93 11161 A (ENZON INC) 10 June 1993 (1993-06-10) cited in the application	1-6, 12, 18, 19
Y	page 4, line 14 -page 7, line 31; claims 1-18 page 13, line 8 -page 17, line 33	1-21
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\* & \* document member of the same patent family

Date of the actual completion of the international search

2 March 2004

Date of mailing of the international search report

11/03/2004

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 447 776 B1 (BECKER KARL-FRIEDRICH ET AL) 10 September 2002 (2002-09-10) cited in the application column 4, line 66 -column 5, line 67; table 2 column 8, line 46 -column 9, line 58 ---	7,8
Y	ARTEAGA DE MURPHY C ET AL: "PHOSPHINE REDUCED IGG: A NEW METHOD FOR 99MTC LABELING IMMUNOGLOBULINS" JOURNAL OF RADIOANALYTICAL AND NUCLEAR CHEMISTRY, ARTICLES, ELSEVIER SEQUOIA S.A., LAUSANNE, CH, vol. 220, no. 1, 1997, pages 41-45, XP000199389 the whole document ---	11,12, 14,17,18
Y	EP 0 419 203 A (IMMUNOMEDICS INC) 27 March 1991 (1991-03-27) the whole document ---	11,12, 14,17,18
Y	YASUSHI FUJIOKA ET AL: "Renal metabolism of 3'-iodohippuryl N-maleoyl -L-Lysine (HML)-conjugated Fab fragments" BIOCONJUGATE CHEMISTRY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 12, no. 2, March 2001 (2001-03), pages 178-185, XP001165761 ISSN: 1043-1802 abstract; figure 2 ---	12,13
Y	SAVIRANTA PETRI ET AL: "In vitro enzymatic biotinylation of recombinant Fab fragments through a peptide acceptor tail" BIOCONJUGATE CHEMISTRY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, US, vol. 9, no. 6, November 1998 (1998-11), pages 725-735, XP002159053 ISSN: 1043-1802 the whole document ---	9,10,20, 21
Y	SENEKOWITSCH-SCHMIDTKE REINGARD ET AL: "Highly specific tumor binding of a 213Bi-labeled monoclonal antibody against mutant E-cadherin suggests its usefulness for locoregional alpha-radioimmunotherapy of diffuse-type gastric cancer" CANCER RESEARCH, vol. 61, no. 7, 1 April 2001 (2001-04-01), pages 2804-2808, XP001179836 ISSN: 0008-5472 the whole document ---	1-7,11, 12,14
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,Y	<p>MIEDERER MATTHIAS ET AL: "Comparison of the radiotoxicity of two alpha-particle-emitting immunoconjugates, terbium-149 and bismuth-213, directed against a tumor-specific, exon 9 deleted (d9) E-cadherin adhesion protein." RADIATION RESEARCH, vol. 159, no. 5, May 2003 (2003-05), pages 612-620, XP009026798 ISSN: 0033-7587 (ISSN print) the whole document</p> <p>----</p>	1-7,11, 12,14
P,Y	<p>HUBER ROSWITHA ET AL: "Locoregional alpha-radioimmunotherapy of intraperitoneal tumor cell dissemination using a tumor-specific monoclonal antibody." CLINICAL CANCER RESEARCH: AN OFFICIAL JOURNAL OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH. UNITED STATES 1 SEP 2003, vol. 9, no. 10 Pt 2, 1 September 2003 (2003-09-01), pages 3922S-8S, XP001179837 ISSN: 1078-0432 the whole document</p> <p>----</p>	1-7,11, 12,14
A	<p>US 5 274 119 A (FRAZIER KEVIN A ET AL) 28 December 1993 (1993-12-28) the whole document</p> <p>----</p>	1-21
A	<p>ANELLI ET AL: "L-Glutamic acid and L-lysine as useful building blocks for the preparation of bifunctional DTPA-like ligands" BIOCONJUGATE CHEMISTRY, vol. 10, no. 1, 1999, pages 137-140, ABSTRACT, XP002115959 the whole document</p> <p>-----</p>	1-21

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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☒ Claims Nos.: 1-2,4-6,8-21(all in parts)  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-2,4-6,8-21(all in parts)

Present claims 1, 19, 20 and 21 relate to an agent for the diagnosis or treatment of tumors, whereby the part of the agent corresponding to the recognition unit is defined with respect to the characteristics of the tumor. Said definition is so unclear, and thus represents an undue burden in order to determine what tumors fall under said definition, and consequently what the characteristics of the recognition unit should be. As a result, the claims contain so many options, variables, and possible tumor types that a lack of clarity (and/or conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claim impossible.

Present claim 2 relates to an extremely large number of possible compounds, namely immunoglobulins or fragments thereof, polypeptides and polysaccharides.

Claims 5 and 6 relate to a great number of possible proteins altered as a result of a variety of a mutation. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

Consequently, the search has been carried out for those parts of the application which do appear to be clear (and/or concise), namely those agents recited in the examples, as well as the parts of the agent for the diagnosis or treatment of tumors as defined in claims 3, 7, 8, 12-17.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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International Application No  
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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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